

ABSTRACT OF THE DISCLOSURE

This invention is to decrease the sensor pitch,  
prevent saturation by external light, accurately  
determine skimming, simplify skimming determination,  
5 and prevent any difference in influence of the transfer  
efficiency between the ON and OFF states. For this  
purpose, a distance measuring apparatus includes a  
light projection section for projecting light to an  
object, a sensor array for receiving reflected light  
10 from the object, a first transfer section for  
transferring charges from the sensor array, and a  
ring-shaped second charge transfer section for  
integrating the charges from the first transfer  
section, wherein the first charge transfer section  
15 transfers charges in a light projection ON state and  
charges in a light projection OFF state at a timing,  
the transfer frequency of the second charge transfer  
section is twice that of the first charge transfer  
section, and the timing of the first charge transfer  
20 section has a phase different from that of the second  
charge transfer section.